

1 c. a patterned layer of nickel plated over each connection pad for mechanically and
2 electrically bonding to the interconnect metal forming such connection pad, the patterned layer
3 of nickel being in direct contact with the underlying connection pads;

4 d. a patterned layer of palladium plated over the patterned layer of nickel above each
5 connection pad for preventing the nickel from diffusing outwardly through the palladium during
6 subsequent heating cycles; and

7 e. a patterned layer of gold plated over the patterned layer of palladium above each
8 connection pad to facilitate the joinder of such connection pad with a connection element.

9
10 Please cancel claim 6.

11
12 Amend claim 13 as follows:

13 13. (Amended) A process for forming connection pads on a plurality of integrated
14 circuit die formed in a semiconductor wafer, the semiconductor wafer having an upper surface,
15 each of the integrated circuit die having a plurality of semiconductor devices formed therein
16 upon the surface of the semiconductor wafer, said process including the steps of:

17 a. forming a patterned layer of interconnect metal upon the upper surface of the
18 semiconductor wafer for electrically interconnecting the plurality of semiconductor devices
19 formed within each such integrated circuit die, said patterned layer of interconnect metal
20 including connection pads for making electrical connection to circuitry external to the
21 semiconductor wafer;

22 b. following step a., forming a patterned layer of nickel by electroless plating over each
23 connection pad for mechanically and electrically bonding to the interconnect metal at each such
24 connection pad, the patterned layer of nickel being in direct contact with the underlying
25 connection pads;

26 c. following step b., forming a patterned layer of palladium by electroless plating over
27 the patterned layer of nickel above each connection pad for preventing the nickel from diffusing
28 outwardly through the palladium during subsequent heating cycles; and

1 d. following step c., forming a patterned layer of gold by electroless plating over the
2 patterned layer of palladium above each connection pad to facilitate the joinder of such
3 connection pad with a connection element.

4
5 Claim 14, line 1, change "claim 14" to - - claim 13 - -.

6 Claim 15, line 1, change "claim 14" to - - claim 13 - -.

7 Claim 16, line 1, change "claim 14" to - - claim 13 - -.

8 Claim 17, line 1, change "claim 14" to - - claim 13 - -.

9 Please cancel claim 18.

10 Claim 19, line 1, change "claim 14" to - - claim 13 - -.

11 Claim 20, line 1, change "claim 14" to - - claim 13 - -.

12 Claim 21, line 1, change "claim 14" to - - claim 13 - -.

13 Claim 22, line 1, change "claim 14" to - - claim 13 - -.

14 Claim 23, line 1, change "claim 14" to - - claim 13 - -.

15 Claim 24, line 1, change "claim 14" to - - claim 13 - -.

16 Note that a clean set of the amended patent claims is attached to this Amendment.

17

18 **REMARKS**

19 This Amendment is accompanied by a sheet of formal patent drawings, and by a Letter
20 to the Official Draftsperson requesting entry of such formal drawings into the present
21 application.

22 Within Paragraph 2 of the Office Action, the Examiner noted that claims 14-24 should
23 be dependent upon independent claim 13, and not upon dependent claim 14. Claims 14-24
24 have been amended above to correct this error. A clean set of the pending claims is attached to
25 this Amendment as Attachment A.

26 Pending apparatus claims 1-5, 7-10, and 12 have been rejected by the Examiner under
27 35 U.S.C. §103(a) as describing subject matter considered by the Examiner to be obvious from
28 U.S. Patent No. 6,077,723 ("Farnworth") in view of U.S. Patent No. 5,747,881 ("Hosomi").